

### **REMARKS**

Claims 1-11 are pending in this application. Claims 3, 5 and 6 are herein canceled. Claims 1 and 4 are herein amended.

Support for newly amended claim 1 may be found within the as originally filed specification, for example, original claim 3, page 13, paragraph [0024] and examples a-3 and a-9 on page 63.

Support for newly added claims 7-11 may be found within the as originally filed specification, for example page 24, paragraph [0048].

#### **I. Claim Objections**

Claims 3, 4 and 6 were objected due to their informality. Applicants respectfully traverse this objection.

In light of cancelling claims 3 and 6 and amending claim 4, the presently claimed invention is now presented in an acceptable formal manner. Favorable reconsideration is earnestly solicited.

#### **II. The Rejection under 35 U.S.C. §112**

Claims 1, 3, and 5 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Applicants respectfully traverse this rejection.

In light of newly amended claim 1, this rejection is now rendered moot. Favorable reconsideration is earnestly solicited.

**III. The Rejection under 35 U.S.C. §102**

Claims 1 and 2 rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Tanaka et al. (US 6,303,741). Applicants respectfully traverse this rejection.

Claim 1 of the presently claimed invention incorporates the subject matter of originally filed claim 3. Since claim 3 was never rejected as being anticipated by Tanaka et al, the presently claimed invention is novel over Tanaka et al. Favorable reconsideration is earnestly solicited.

**IV. The Rejection Based on Furukawa et al (U.S. 3,872,055)**

Claims 1 and 2 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Furukawa et al. (US 3872055). Applicants respectfully traverse this rejection.

Claim 1 of the presently claimed invention incorporates the subject matter of originally filed claim 3. Since claim 3 was never rejected as being anticipated by Furukawa et al, the presently claimed invention is novel over Furukawa et al. Favorable reconsideration is earnestly solicited.

Claims 3 and 4 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over Furukawa et al. (US 3,872,055). Applicants respectfully traverse these rejections.

As disclosed in Applicants' specification the techniques of the background art, which includes Furukawa et al., exerted an effect for preventing gelation of a polyamide

resin, but were not effective for the filter-clogging problem which is accompanied with recent molded uses that require increased precision. See Applicants' specification, page 3, paragraph [0007].

The presently claimed invention can solve the filter-clogging problem in addition to the gelation prevention. This was for the first time achieved by appropriately defining the amounts of phosphorus atoms and sodium atoms. The gelation is the formation of a three-dimensional structure by a polymer *per se*, but this is the sole cause of the filter-clogging. Additives for suppressing gelation can be a cause of the filter clogging through undergoing chemical change (*e.g.*, a phosphorous compound is oxidized to phosphoric acid, and this is then condensed to a polyphosphoric acid) and separating out from the polymer. That is, the solution to the filter clogging is not an extension of the suppression of gelation. Hence, it is not easy to attain both the suppression of gelation and the prevention of filter clogging.

As described above, for the first time the presently claimed invention solved this problem by appropriately defining the amounts of phosphorus atoms and sodium atoms.

Furukawa et al. broadly discloses a phosphorous amount range. It also discloses a M/P ratio, but this is directed to the purpose of suppressing gelation. Furukawa et al. does not provide any disclosure, teaching, suggestion, or provide any reasoning for solving the filter-clogging problem. In fact, none of the Examples in Furukawa et al.

satisfy the presently claimed phosphorous atom amount and the Na/P ratio embodiments. Accordingly, claim 1 is not obvious from Furukawa et al.

The presently claimed invention can be further explained with reference to the graph attached hereto. The results of the Examples and the Comparative Examples are plotted in the graph. The values inserted in the plot area indicate back pressure increasing coefficients  $K^*$ . The three straight lines are, from upper left side, a line of  $K^*$  being 2.5, a line of  $K^*$  being 3.5-4.0, and a line of  $K^*$  being 14, respectively.

The  $K^*$  becomes larger as it comes closer to the lower right side in the graph. The claimed scope corresponds to the area formed by the conditions that  $30 \text{ ppm} \leq P < 200 \text{ ppm}$  and that  $3.5 \leq \text{Na/P} < 7.0$  and being left-upper than the line of  $K^*$  being 14.

Based on the results in the Examples of Furukawa et al., two points of Furukawa et al. are plotted in the graph. It is evident that these two points have a  $K^*$  value exceeding 14. This also shows that Furukawa et al. fails to have a concept to solve both the gelation problem and the filter clogging problem.

In order to attain the Co-b value as claimed in claim 4, it is necessary to appropriately adjust the preparation conditions, in addition to appropriate defining the phosphorous and sodium amounts. See Applicants' specification, page 20, paragraph [0042].

The results of the presently claimed invention are unexpected over the disclosure of Furukawa et al, as illustrated in the graph.

Thus, the presently claimed invention is unobvious from Furukawa et al.  
Favorable reconsideration is earnestly solicited.

**V. The Rejection Bas`ed on Fujimoto et al (U.S. 3,536,804)**

Claims 1 and 2 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Fujimoto et al. (US 3536804). Applicants respectfully traverse this rejection. Applicants respectfully traverse this rejection.

Claim 1 of the presently claimed invention incorporates the subject matter of originally filed claim 3. Since claim 3 was never rejected as being anticipated by Fujimoto et al, the presently claimed invention is novel over Fujimoto et al. Favorable reconsideration is earnestly solicited.

Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fujimoto et al. (U.S. 3,536,804).

In light of claims 5 and 6 being cancelled, this rejection is now rendered moot.

**VII. The Rejection Based on Pagilagan in view of Vandevijver et al.**

Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Pagilagan (U.S. 6,191,251) in view of Vandevijver et al. (U.S. 5,416,189).

In light of claims 5 and 6 being cancelled, this rejection is now rendered moot.

Application No.: 10/584,268  
Art Unit: 1796

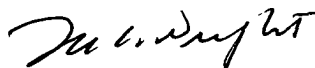
Amendment under 37 C.F.R. §1.111  
Attorney Docket No.: 062724

In view of the above, Applicants respectfully submit that their claimed invention is allowable and ask that the rejections under 35 U.S.C. §112, 35 U.S.C. §102 and 35 U.S.C. §103 be reconsidered and withdrawn. Applicants respectfully submit that this case is in condition for allowance and allowance is respectfully solicited.

If any points remain at issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the local exchange number listed below.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

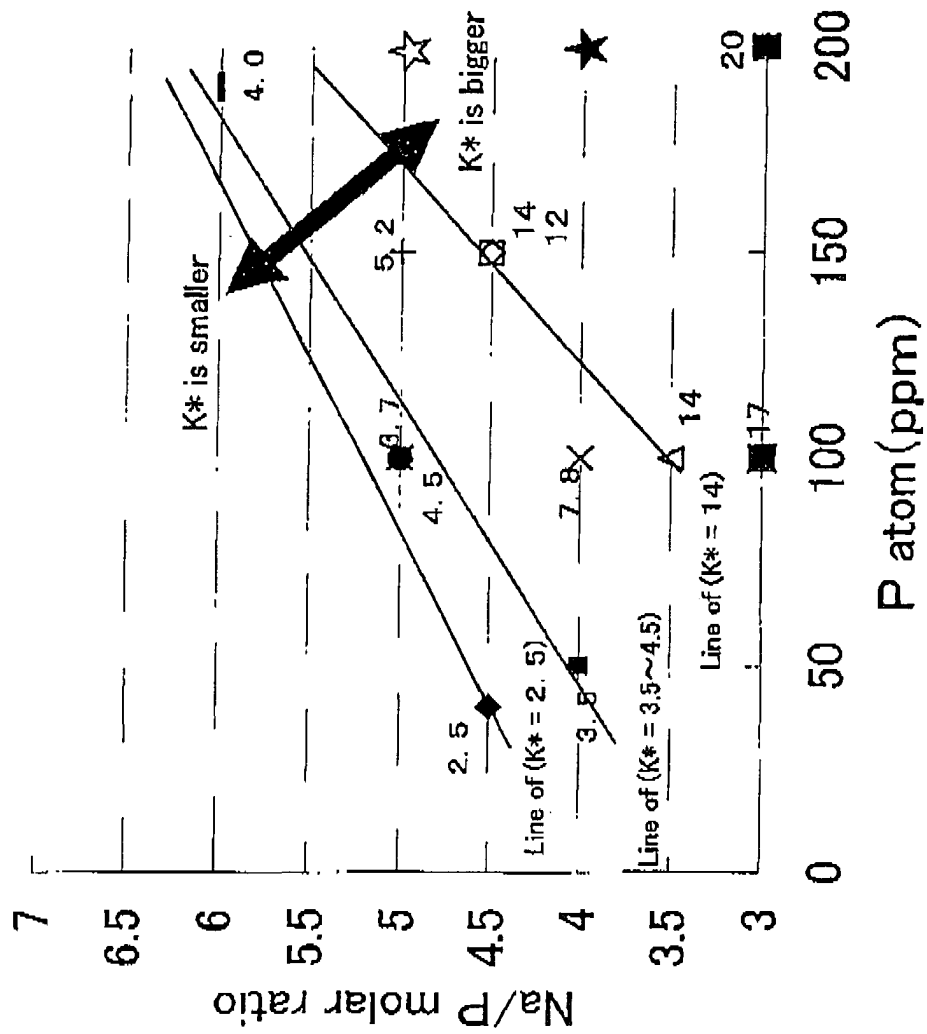
Respectfully submitted,  
**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**



Lee C. Wright  
Attorney for Applicants  
Registration No. 41,441  
Telephone: (202) 822-1100  
Facsimile: (202) 822-1111

LCW/BKM/bam

Enclosure: Graph of Na/P molar ratio vs. P atom



- ◆ Example a-1
- Example a-2
- △ Example a-3
- × Example a-4
- ✕ Example a-5
- Example a-6
- + Example a-7
- Example a-8
- Example a-9
- ◇ Example a-10
- Comp. example 1
- Comp. example 3

Furukawa Examples  
Table 1 No.5  
No.11